REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 2, 8, 14, 21-32, 34-35 and 37-38 are cancelled. Claims 1, 3-7, 9-13, 15-20, 33, 36 and 39-41 remain in this application and, as amended herein, are submitted for the Examiner's reconsideration.

Claims 1, 7, 13, 19-20, 33 and 36 have been amended to include the limitations previously called for in claims 2, 8, 14, 21, 34 and 37 and to place the application in condition for allowance. It is therefore submitted that this amendment should be entered.

Claims 3, 9, 15, and 39-41 have been amended solely to maintain proper antecedence. No new matter has been added by these amendments.

In the Office Action, claims 1-21, 33-34, 36-37 and 39-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Naoi (U.S. Patent No. 6,683,617) in view of Marugame (U.S. Patent No. 5,995,649). Claims 2, 8, 14, 21, 34 and 37 are cancelled. It is submitted that the remaining claims are patentably distinguishable over the cited references.

The Naoi patent describes the image processing of polygons representing a three-dimensional image *on a scanning line basis*. The edges of each polygon are divided into segments according to the scan lines that intersect that polygon, and the polygon edge segments of *each scan line* are further divided among four sub-lines, each one-fourth the size of a pixel. The polygons lying along *each sub-line of each scan line* are then sorted according to their X-coordinate values, and the polygons that occupy the same region of a sub-line are sorted according to their Z-coordinate values. The display site data of each sub-line is then combined for each given polygon and then

further combined *for each scan line*, sub-pixel masks of each polygon are formed *for each pixel of the display screen*, and then color data is associated with each sub-pixel mask. Then, *for each pixel of the display screen*, sub-pixel masks for that pixel are iteratively processed by (i) combining four such sub-pixel masks to form eight new sub-pixel masks, (ii) selecting four of the eight new sub-pixel masks to replace the prior four sub-pixel masks, and (iii) entering additional such data and repeating steps (i) and (ii) until all such data for the pixel is processed. (*See* Figs. 1-7 and 10; col. 3, line 34 - col. 4, line 8; col. 4, lines 15-23; col. 5, line 41 - col. 7, line 39; col. 8, lines 1-6 and 60-65, col. 9, lines 26-35; col. 10, lines 8-14 and 55-67; and col. 11, lines 1-9).

The Examiner acknowledges that Naoi does not teach the claimed extracting means but asserts that Marugame teaches this feature. The Marugame patent, however, is concerned with extracting *the entire image* of a specific object from among input images, rather than extracting *only data representing a contour line* of the object or extracting *only data representing a contour candidate line* of the object.

Specifically, Marugame describes extracting a particular reference point for each accumulated image of the object, namely, the pixel where the color and brightness are conspicuously different from other pixels, calculating a three dimensional coordinate value from the reference points, using the three dimensional coordinate value to select two object contour points from among the reference points, and then extracting *a horizontal line portion* that extends between the two contour object points. (*See* Figs. 10A, 10B and 12; col. 10, line 35 to col. 11, line 39; col. 13, lines 19-47; col. 14, line 58 to col. 15, line 4; col. 15, lines 35-47; and col. 16,

lines 1-37). Because the two object contour points are the leftmost and the rightmost of the reference points, the horizontal line portion between the two object contour points is *a cross-sectional line* of the object, rather than *a contour line* of the object or *a contour candidate line* of the object. The patent therefore does not disclose or suggest extracting *only data representing the visually important line part*. Namely, the patent does not disclose or suggest extracting *only data representing a contour line* of the depicted object, and the patent does not disclose or suggest extracting *only data representing a contour candidate line* of the depicted object.

Neither Naoi nor Marugame discloses or suggests:

> extracting means for determining that a given line part of an object depicted in a three-dimensional image is a visually important line part, the visually important line part being a contour line of the depicted object or a contour candidate line of the depicted object, and for extracting only data representing the visually important line part from data representing the three-dimensional image

as defined in claim 1.

The Examiner also contends that Naoi teaches the claimed antialiasing means and refers to the Abstract and to column 11, lines 40-50 of Naoi. However, the Abstract merely indicates that Naoi discloses an antialiasing method, and the cited portion of the description merely indicates that subpixel based antialiasing is carried out. Further, as described above, Naoi discloses processing on a pixel-by-pixel basis, namely Naoi describes antialiasing by processing *every pixel of every scanning line of the display screen*. The patent does not disclose or suggest antialiasing *only the data representing a visually important line part*, namely, antialiasing *only the data representing a contour line* of the depicted object or

antialiasing *only the data representing a contour candidate line* of the depicted object.

The Marugame patent is not concerned with antialiasing and, as noted above, Marugame discloses extracting *a cross-sectional line* of the image, rather than *a contour line* of the image or *a contour candidate line* of the image.

Therefore, even if the references are combined in the asserted manner, the asserted combination would, at best, teach antialiasing *the extracted data representing a cross-sectional line* of the object, rather than antialiasing *only the extracted data representing a contour line* or extracting *only the extracted data representing the contour candidate line*. The asserted combination would not disclose or suggest antialiasing *only the extracted data* which, as defined in claim 1, *represents the contour line of the depicted object or the contour candidate line of the depicted object*.

Therefore, neither reference discloses or suggests:

> antialiasing means for antialiasing only the extracted data to form an antialiased image portion associated with the visually important line part

as called for in claim 1.

The Examiner also contends that Naoi teaches the claimed overwriting means and refers to the integration-selection circuit 105 of Fig. 7 of the reference. However, as described above, Naoi merely shows an integration-selection circuit that generates final color data and subpixel mask sets *for every pixel of every scanning line of the display screen*. The patent therefore describes overwriting *an entire antialiased image*, rather than overwriting *only an antialiased image portion* formed by antialiasing *only data representing a contour line* of a depicted object or by

antialiasing *only data representing a contour candidate line* of a depicted object.

Also, Marugame is not concerned with overwriting antialiased data.

Therefore, even if the references are combined in the asserted manner, the asserted combination would not disclose or suggest overwriting *only the antialiased image portion* which, as defined in claim 1, is *formed by antialiasing only the extracted data representing the contour line of the depicted object or representing the contour candidate line of the depicted object*.

Neither Naomi nor Marugame discloses or suggests:

> overwriting means for overwriting only the antialiased image portion onto a corresponding portion of the rendered image

as set out in claim 1.

It follows that neither Naoi nor Marugame, whether taken alone or in combination, discloses or suggests the image rendering apparatus defined in claim 1. Therefore, claim 1 is patentably distinguish and unobvious over the cited references.

Claims 3-6 depend from claim 1, and each further defines and limits the invention set out in the independent claim. It follows that each of claims 3-6 defines a combination that is patentably distinguishable over the cited references for at least the same reasons.

Independent claim 7 is directed to an image rendering method that includes limitations similar to those set out in claim 1. It follows that claim 7 is patentably distinguishable over Naoi and Marugame at least for the reasons set out above regarding claim 1.

Claims 9-12 depend from claim 7 and are therefore each distinguishable over the cited references for at least the same reasons.

Independent claim 13 is directed to a computer-readable storage medium having a computer program stored therein for operating an apparatus to perform the image rendering method defined in claim 7. Claim 13 is therefore patentably distinguishable over Naoi and Marugame for at least the same reasons.

Claims 15-18 depend from claim 13 and are distinguishable over the cited art at least for the same reasons.

Independent claim 19 relates to a server apparatus that includes a computer-readable storage medium similar to that defined in claim 13. Therefore, at least for the same reasons, claim 19 is patentably distinguishable over the Naoi and Marugame references.

Claim 20 defines a computer-readable storage medium having limitations similar to those set out in claim 13 and is patentably distinguishable over Naoi and Marugame at least for the same reasons.

Claim 39 depends from claim 20 and is distinguishable over the cited art at least for the same reasons.

Independent claim 33 calls for an image rendering apparatus having limitations similar to those set out in claim 1. Claim 33 is therefore patentably distinguishable over the Naoi and Marugame patents at least for the same reasons.

Claim 40 depends from claim 33 and is distinguishable over the cited references for at least the same reasons.

Independent claim 36 defines an image rendering method having limitations similar to those set out in claim 7. It follows that claim 36 is patentably distinguishable over Naoi and Marugame at least for the same reasons.

Claim 41 depends from claim 36 and are distinguishable over Naoi and Marugame for at least the same reasons.

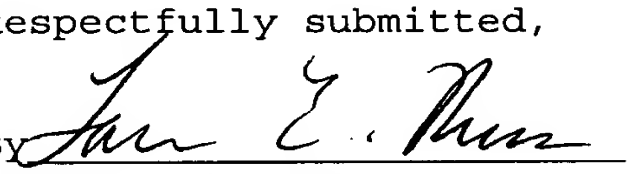
Accordingly, the withdrawal of the rejection under 35 U.S.C. § 103 is respectfully requested.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that the Examiner telephone Applicant's attorney at (908) 654-5000 in order to overcome any additional objections which the Examiner might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: July 21, 2005

Respectfully submitted,

By 

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